

EXHIBIT A

COMMONWEALTH OF MASSACHUSETTS

HAMPDEN, SS.

SUPERIOR COURT
CIVIL ACTION NO. 21 0031

MANSIR PRINTING, LLC,
Plaintiff

V

UNION MUTUAL FIRE INSURANCE
COMPANY,
Defendant

HAMPDEN COUNTY
SUPERIOR COURT
FILED

JAN 20 2021


CLERK OF COURTS

VERIFIED COMPLAINT

Parties

1. The Plaintiff, Mansir Printing, LLC (Plaintiff), is a Massachusetts limited liability company with a place of business at 24 Shawmut Avenue, Holyoke, Hampden County, Massachusetts.

2. The Defendant, Union Mutual Fire Insurance Company (Defendant), is a duly organized insurance company conducting business in Massachusetts with a place of business at 139 State Street, Montpelier, Vermont.

COUNT I

(Negligence)

3. On or about February 25, 2019 the Plaintiff's roof at their facility was damaged due to a continuous wind/rain storm.

4. Plaintiff notified Defendant of the roof damage and made an insurance claim.

5. Plaintiff hired an expert and May 2, 2019 Worthington Construction Group wrote a report regarding the Plaintiff's roof and concluded the Plaintiff's roof cannot be repaired and needs to be replaced. See Exhibit 1.

6. Defendant's expert, T.A.M. Engineering & Associates, Inc., submitted a Field Inspection Report dated May 2, 2019. See Exhibit 2.

7. Plaintiff's hired another expert to evaluate the roof and received an Investigation & Evaluation Report from Hervieux Design indicating the same as their previous expert, that the roof cannot be repaired and needs to be replaced. See Exhibit 3.

8. As a result of the negligence of the Defendant, the Plaintiff's roof at their business sustained severe damage that calls for the roof to be replaced, and the Defendant has refused to cover Plaintiff's insurance claim to have the roof replaced.

WHEREFORE, the Plaintiff demands judgment on Count I against the Defendant for damages, interest, costs and such other relief as the Court deems just and proper.

COUNT II

(c. 93A and c. 176D Claim)

9. The Plaintiff realleges and incorporates by reference the allegations set forth in each of the above paragraphs of this Complaint.

10. The Defendant made a de minimis partial payment for repair of roof but failed to make a good faith settlement offer to replace the roof.

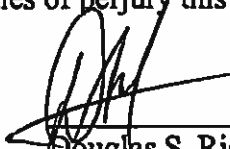
WHEREFORE, the Plaintiff demands judgment on Count II against the Defendant for damages, interest, costs and such other relief as the Court deems just and proper.

PLAINTIFF RESPECTFULLY REQUESTS A TRIAL BY JURY ON ALL COUNTS.

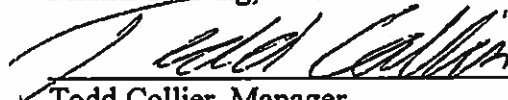
VERIFICATION AND ATTESTATION

We, Douglas S. Riel, Todd Collier and Harold S. Chapman, hereby swear under oath and affirm that we have read the foregoing Complaint, that we have personal knowledge of the matters alleged herein, and that we verify the allegations to be true.

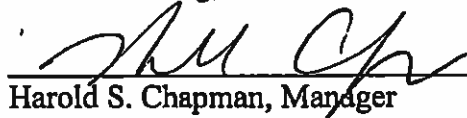
Signed under the pains and penalties of perjury this 13 day of January, 2021.



Douglas S. Riel, Manager
Mansir Printing, LLC




Todd Collier, Manager
Mansir Printing, LLC



Harold S. Chapman, Manager
Mansir Printing, LLC

THE PLAINTIFF
MANSIR PRINTING, LLC
By Its Attorneys
FERRITER & FERRITER LLC by

Date: January 14, 2021



John J. Ferriter, BBO# 547474
1669 Northampton Street
Holyoke, MA 01040
Phone 413-535-4200
Fax 413-535-4201

May 2, 2019

RE: Mansir Printing LLC & RCC Realty LLC
24 Shawmut Ave.
Holyoke, MA 01041

Claim #: CLM42661



Good Afternoon Tom,

Background:

On 2/26/19 the insured Mansir Printing LLC & RCC Realty LLC, Located at 24 Shawmut Ave. in the City of Holyoke Massachusetts experienced a loss due to a continuous wind / rain storm. The wind from this storm lifted and tore a section of roofing membrane and wall flashing metal rolling it back over the top of the roof. Attached to this membrane was fasteners, insulation, and portions of the multiple layer below along with the original roofing wall cap metal (Ballast Stop), exposing a portion of the roof deck below along with the subsequent roofing layer consisting of Bitumen, tar, ballast stones, insulation, etc. Due to the underlying roof deck structure and primary layer being expose to the wind driven rain, water entered through the T&G decking to the interior of the structure. At that time the owners notice ponding of water in the buildings interior. After which the roof was tarped, and the claims process began. Subsequently and engineer had been hired by the insurance company to inspect the roof. During the inspection by the engineer; the engineer did not remove the tarp from any portion of the roof to inspect the damage to the roofing or wall assemblies; did not take sample of any portion of the roof coverings via core samples or any other means to determine layers, materials, insulation values, environmental hazards, weights, assemblies, or composition; did not engage in any moisture reading or sampling from any portion of the roof, to determine water migration. In essence, the engineer visually inspected the roof surface as is, and visually inspected the interior directly below the damaged roof.

It is my understand that your engineer indicated that the roof in question can be repaired, and in some circumstances that may be the case. However due to the cause of damage to the roof, in this particular loss, the roof as outlined in the claim cannot legally be repaired. As you will see in the discussion below. Due to damage being caused by the wind or "wind damage" repair of the existing roof is not an option, and full replacement is mandated. The cause of loss also triggers additional code requirements as discussed below, as these relate to roofing assembly compliance with the International Building Code (IBC) for load combinations that include wind and earthquake effects, wind uplift and seismic bracing in non compliant buildings. (IECC) International Energy Conservation Code, for Roofing assemblies in non compliant buildings meeting the minimum roofing insulation and ventilation standards, Massachusetts Building Code 9th Edition 780 CMR as this relates to construction control, permitting, oversight, safety, documentation, etc. Environmental Regulation as they relate to removal and disposal of existing roofing material, damaged or otherwise.

The 9th Edition of the Massachusetts building code chapter 34, known as 780 CMR 34, adopts the International Existing Building Code (IEBC) 2015 with modifications. These codes are what govern the repair and overall construction of the above noted project. The work area method in the IEBC applies to this project and the construction requirements are encompassed within the IEBC chapter 6 and chapter 7 alterations, Level 1, specifically IEBC 701.1

The IEBC is a model code in the International Code Family of codes intended to provide alternative approaches to repair, alteration, and additions to existing buildings that are non compliant with current building codes for new construction. At the same time, regulate construction in existing building that undergo repairs or alterations. In some cases this allows for a controlled departure from full compliance with the international codes dealing with new construction.

(IEBC) chapter 4 Section 404.2.3 Extent of repair for noncompliant buildings. States that if the evaluation does not establish compliance of the pre-damage building in accordance with Section 404.2.1 then the building shall be rehabilitated to comply with the applicable provisions of the International Building Code for load combinations that include wind or seismic loads. The wind loads for the repair shall be as required by the building code in effect at the time of original construction, unless the damage was caused by wind, in which case the wind loads shall be as required by the international Building Code. New structural members and connections required by this rehabilitation design shall comply with the detailing provisions of the International Building Code for new buildings of similar structure, purpose and location.

(IEBC) 2015 chapter 6 governs the repair of existing buildings. The provisions define conditions under which repairs may be made using material and methods like those of the original construction or the extent to which repairs must comply with requirements for new buildings.

(IEBC) chapter 6 section 606.1 General. States that, structural repairs shall be in compliance with this section and section 601.2 Regardless of the extent of structural or nonstructural damage. Dangerous conditions shall be eliminated, regardless of the scope of repair, new structural members and connections used for repair or rehabilitation shall comply with the detailing provisions of the International Building Code for new buildings of similar structure, purpose and location.

(IEBC) Chapter 6 Section 606.2.2.3 Extent of repair for noncompliant buildings. States that If the evaluation does not establish that the building in its pre-damage condition complies with the provisions of Section 606.2.2.1, then the building shall be rehabilitated to comply with the provisions of the section. The wind loads for the repair and rehabilitation shall be those required by the building code in effect at the time of original construction, Unless the damage was caused by wind, in which case the wind loads shall be in accordance with the international building code.

(IBC) International Building Code Chapter 15 Roof Assemblies and Rooftop Structures

- IBC 1504.1 Wind resistance of roofs
- IBC 1507 Requirements for roof coverings
- IBC 1507.1.1 Modified bitumen roofing compliance
- IBC 1507.1.1.3 Underlayment Attachment
- IBC 1507.3.3 Underlayment conformity
- IBC 1508 Roof Insulation
- IBC 1511 ReRoofing
- IBC 1511.3.1.1 Roof Recover

Summation:

In essence due to the nature of the loss being created by the wind, it is clear that the roof cannot be repaired, as the building codes that govern the repairs of existing buildings specifically state that if the damage is caused by wind, then the building assembly (Roof) must be brought into full compliance with the current codes as they pertain to the detailing provisions for new construction. Also stated in the IEBC, is that regardless of the extent of structural or non structural damage and regardless of the scope of repair if the damage was cause by wind, then the (Roof) must be brought into full compliance with the current codes as they pertain to the detailing provisions for new construction.

780 CMR also state that codes for roof repair are governed by the manufacturers printed instructions, in which case the manufacturer does not allow for seaming to existing roof membrane that is showing signs cracking, blistering, wear, or lifting, of which this roof membrane clearly has cracking, and seam separation.

The IECC International Energy Code requires that in our climate zone (5) the roof must be insulated to a R-value of 30 which would require insulating above the roof deck along with mandated ventilation.

Sincerely

Paul DeGray
Worthington Construction Group, Inc.
Paul@worthingtonconstructiongroupinc.com
Pmdmrc@comcast.net
413.246.9867 Cell
800.386.0179 Office

T.A.M. ENGINEERING & ASSOCIATES, INC.

15 BENTON DRIVE
EAST LONGMEADOW, MASSACHUSETTS 01028
THOMAS@TAMENGINEER.COM
413-775-3429

Field Inspection Report

Client: Mr. Tom Abel
Regional General Adjuster
Union Mutual Insurance Company
P.O. Box 158 / 139 State Street
Montpelier, Vermont 05602

Project: Mansir Printing
24 Shawmut Avenue
Holyoke, Massachusetts 01040

RE: Roof Damage-Code provisions
CL#42661

TAM Engineer ref# 19-021
DOL: 2-25-19

Inspection Date: 3-15-19

Date of Report: 5-2-19

On March 11, 2019, Mr. Tom Abel of Union Mutual Insurance Company, requested T.A.M. Engineering & Associates to perform a visual inspection at the subject property to:

- 1) Determine what code provisions may apply for the section of the roof area that was damaged from a reported wind event.

Background:

According to Todd Collier, insured representative, and Anthony Matos – Roofing Contractor, due to a small portion of the rear section of the modified bitumen roof that was reportedly damaged by wind that reportedly consists of two or more layers; that the entire roof area on this roof section of the building has to be replaced due to code provisions.

Inspection:

A visual inspection was performed on March 11, 2019 where the undersigned met with Mr. Collier and contractor who provided access and general background information. This inspection was documented with notes, measurements, and photographs. Photographs not utilized within this report shall be retained on file and available upon request.

19-021 Mansir Printing, 24 Shawmut Avenue, Holyoke, Massachusetts 01040

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Summary of Observations:

The subject building was a large steel, masonry, and wood framed commercial structure that consisted of multiple flat roof levels. For purposes of discussion, the property generally faced to the north. This report shall focus only on the roof level/area that was reportedly damaged by the storm event.



Photo 1. Google Maps ® general approximate overview of the subject property and concerned roof area. Area that is shaded represents approximate proposed repair area.

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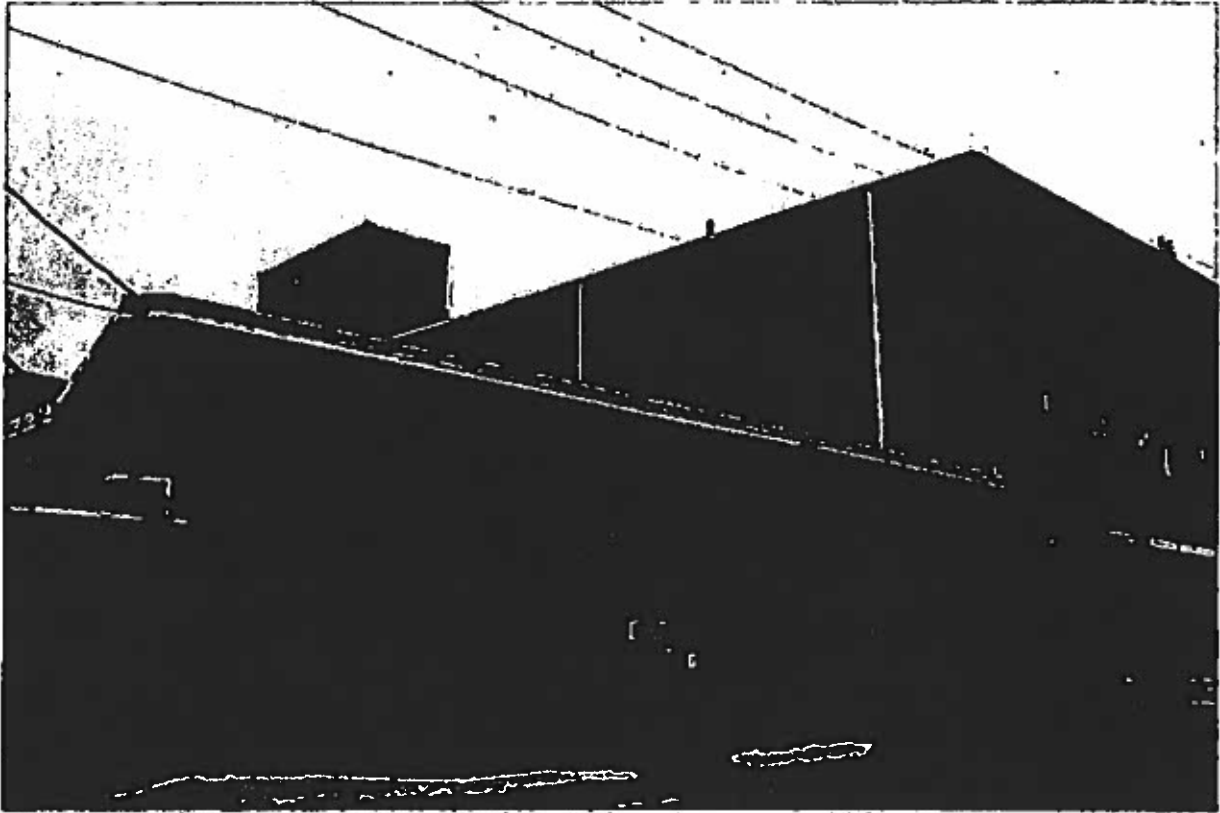


Photo 2. Front (north) elevation.

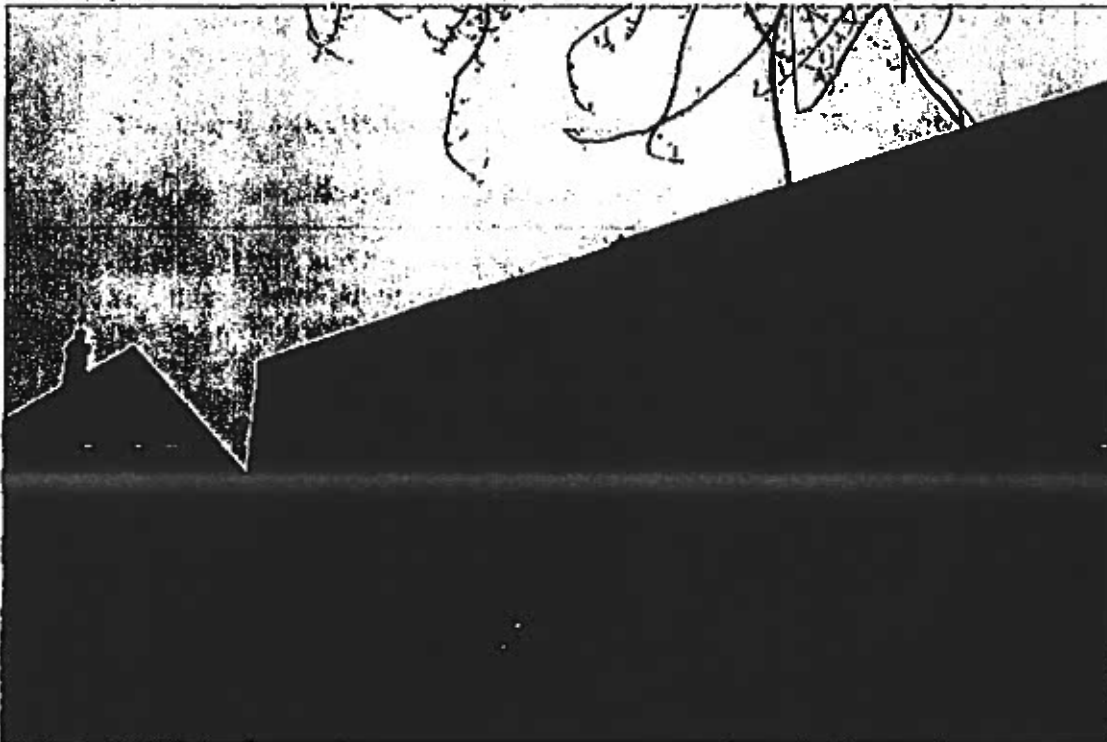


Photo 3. Left (northwest) elevation.

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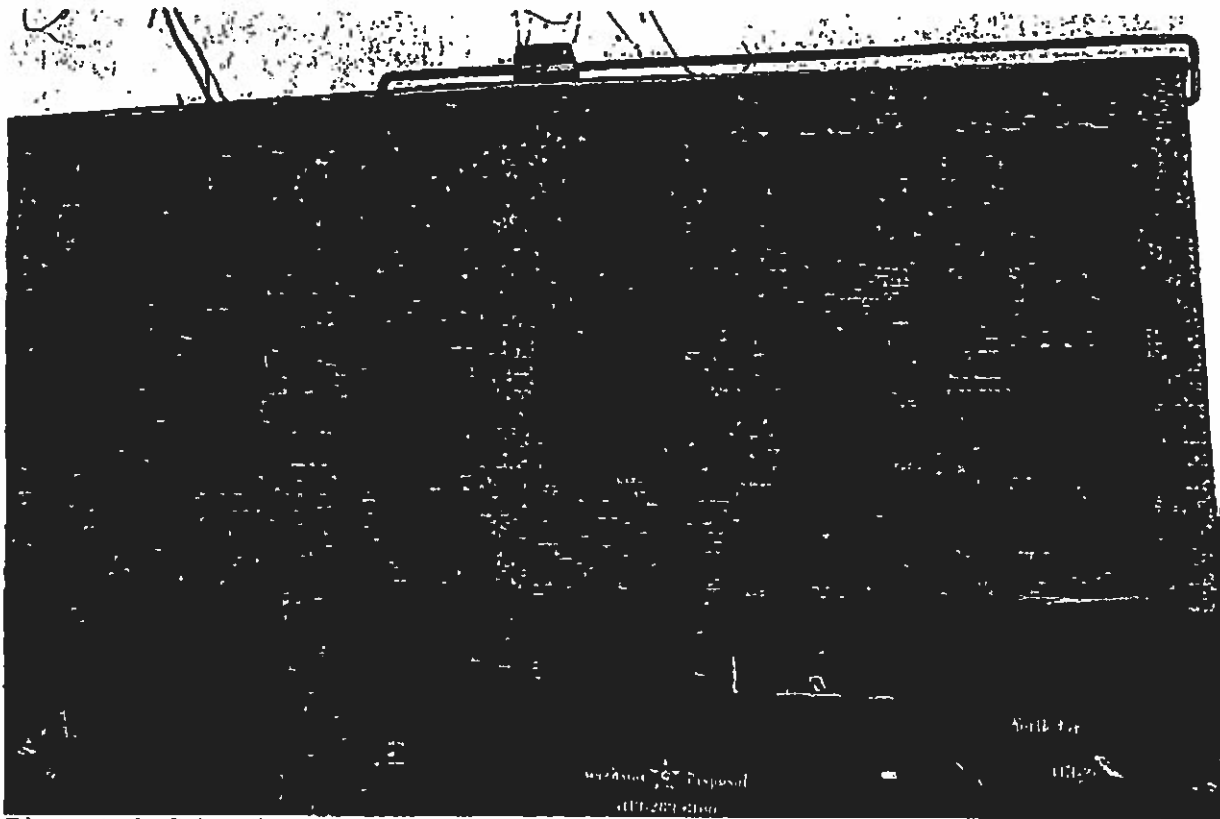


Photo 4. Left (southwest) portion of the roof where the damage is located.

- The rear portion of the roof area damaged by the storm had been tarped and secured to the roof.
- The existing roof membrane consisted of a built up modified bitumen single ply membrane.
- The existing membrane throughout the entire roof area on this roof level was aged, and contained various areas of past repairs along seams, perimeter, and was mapcracked due to the asphalt emulsion drying up and cracking from normal wear/tear/exposure to the elements/sun.
- Portions of the flat roof throughout the other roof areas contained evidence and debris residual consistent with ponding.
- An approximate area that should be removed and replaced as part of the storm damage should be the rear "L" portion of the roof (area that was tarped) up to the existing jog in the roof.

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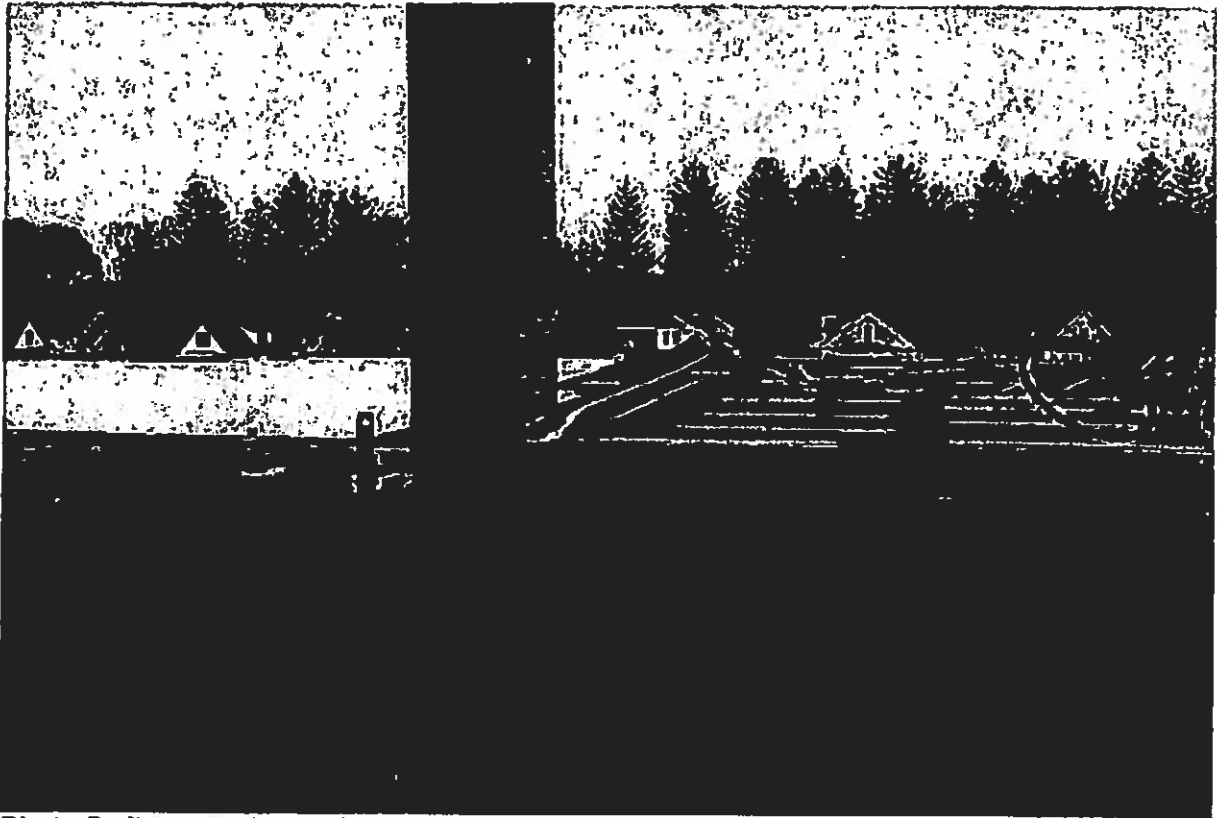


Photo 5. Rear portion of the roof that was tarp, covering up the damaged area along the west wall. Limit of approximate repair noted with line.

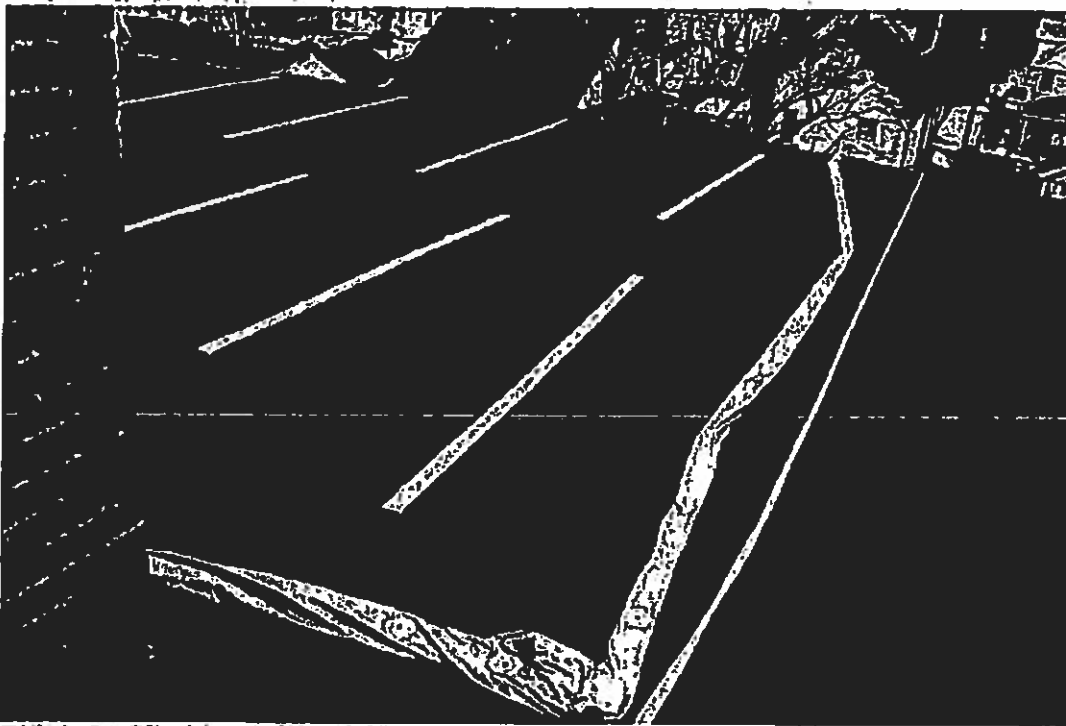


Photo 6. Section along the roof/tarp area where a seam could be installed.

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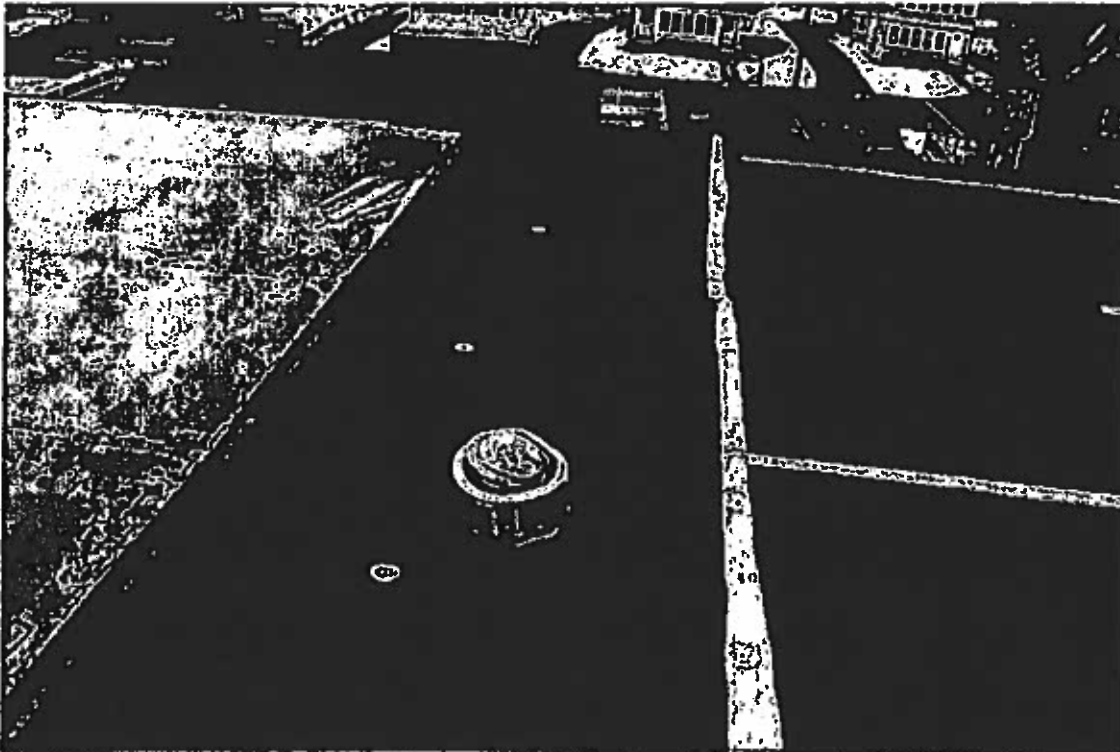


Photo 7. North end of the roof where the edge/termination section is before it drops to another type of roof.

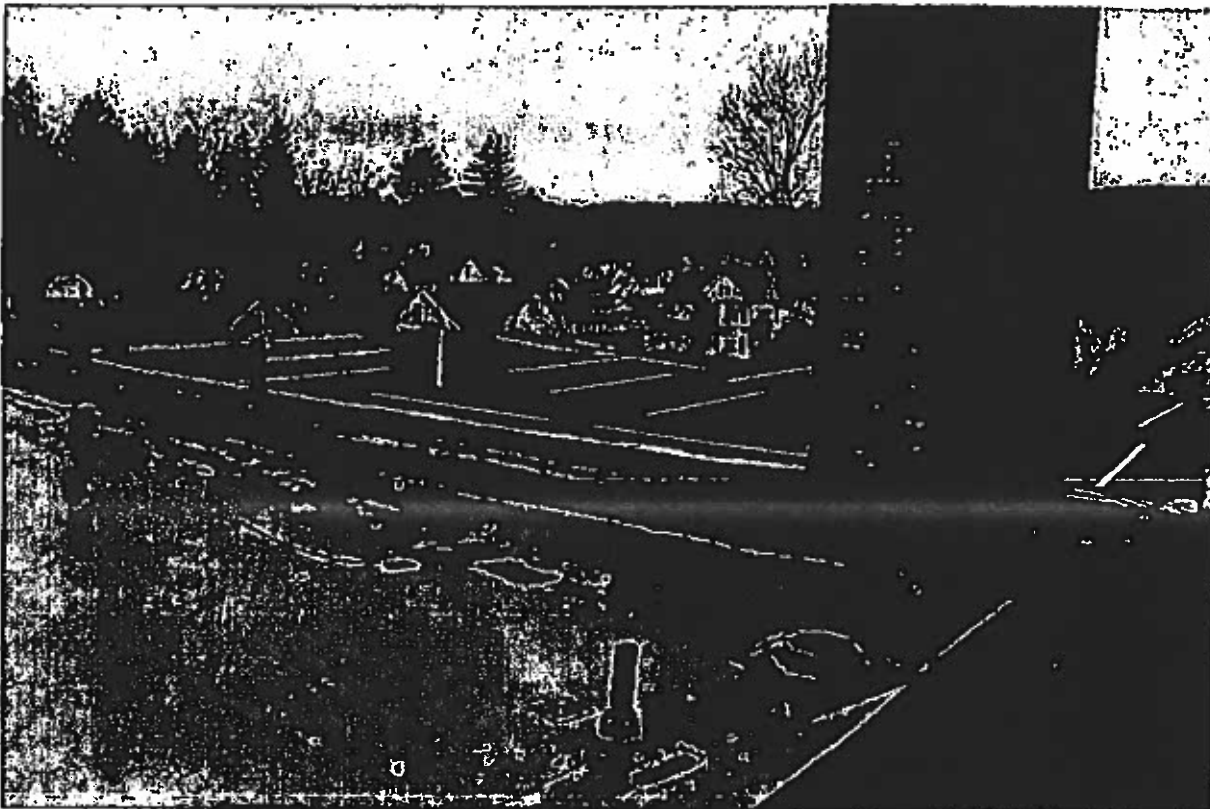


Photo 8. North end of the roof section. Note lower roof level and type *not damaged.

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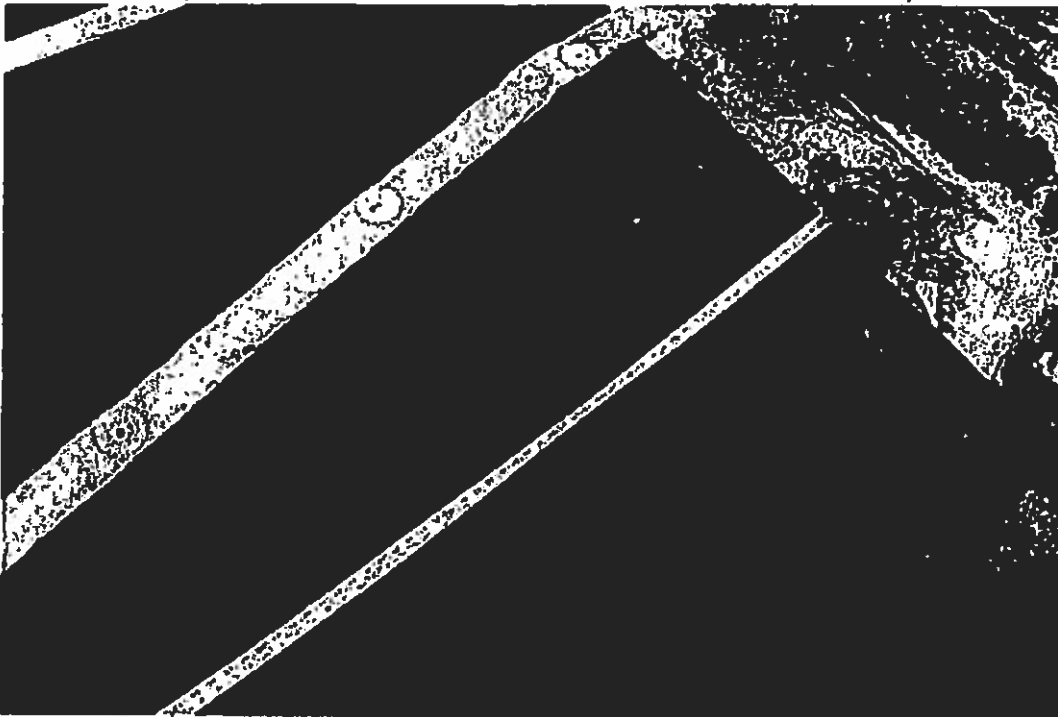


Photo 9. Roof membrane installed in 36" panels with approximate 6-8" overlap at seams and perimeter.



Photo 10. Note mapcracking of existing roof area.

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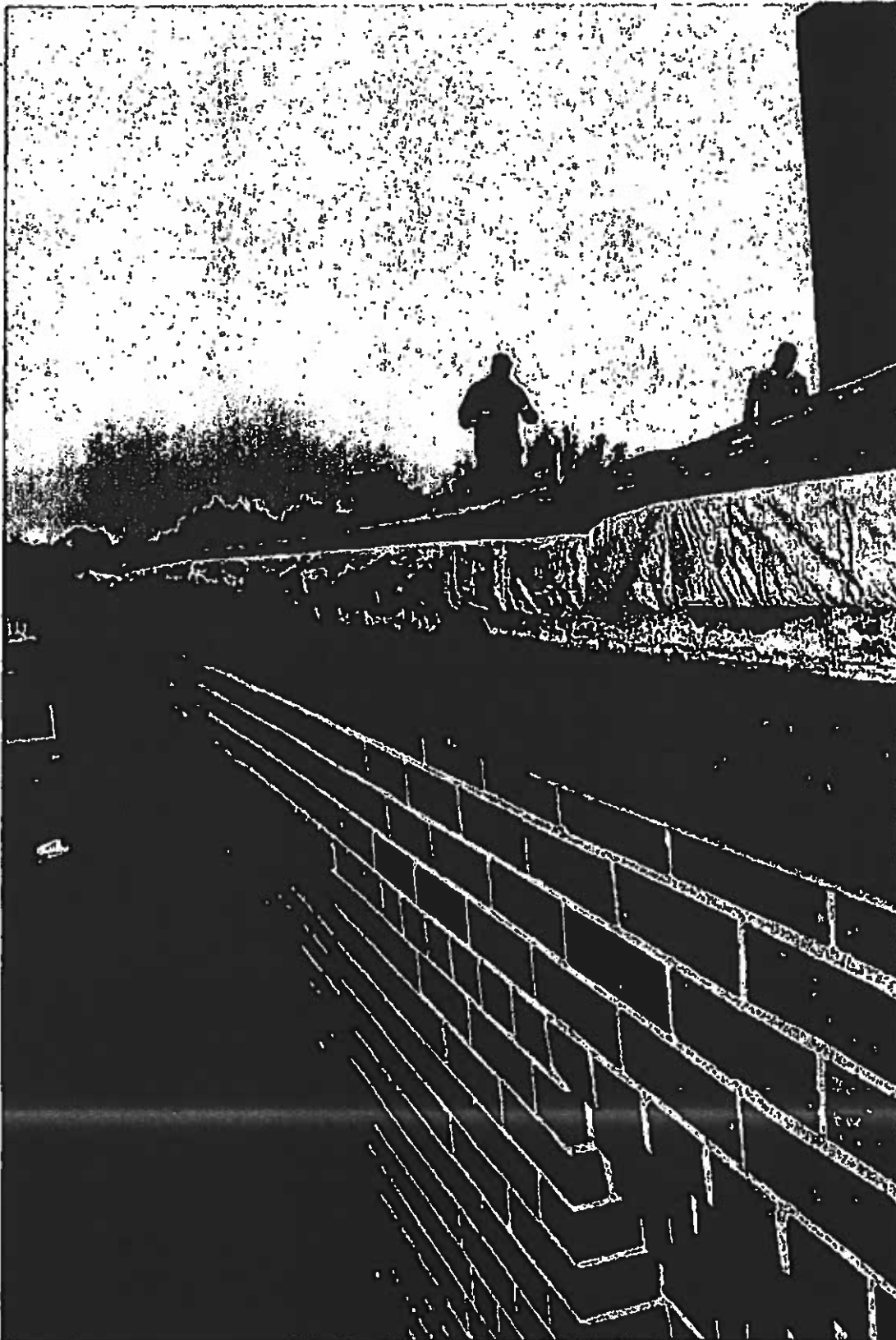


Photo 11. Roof coping/drip edge along the west elevation.

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Photo 12. Main remaining area of the existing roof depicting no storm related damage.

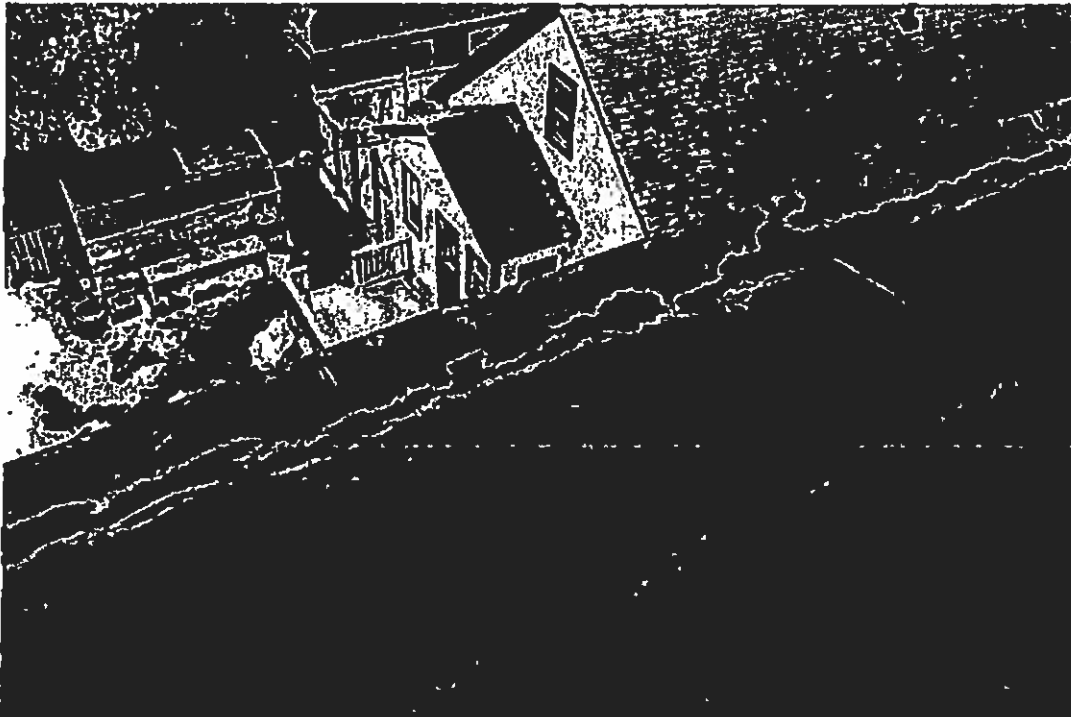


Photo 13. Front edge depicting wear/tear seam cracks along the edging and overlapping coping.

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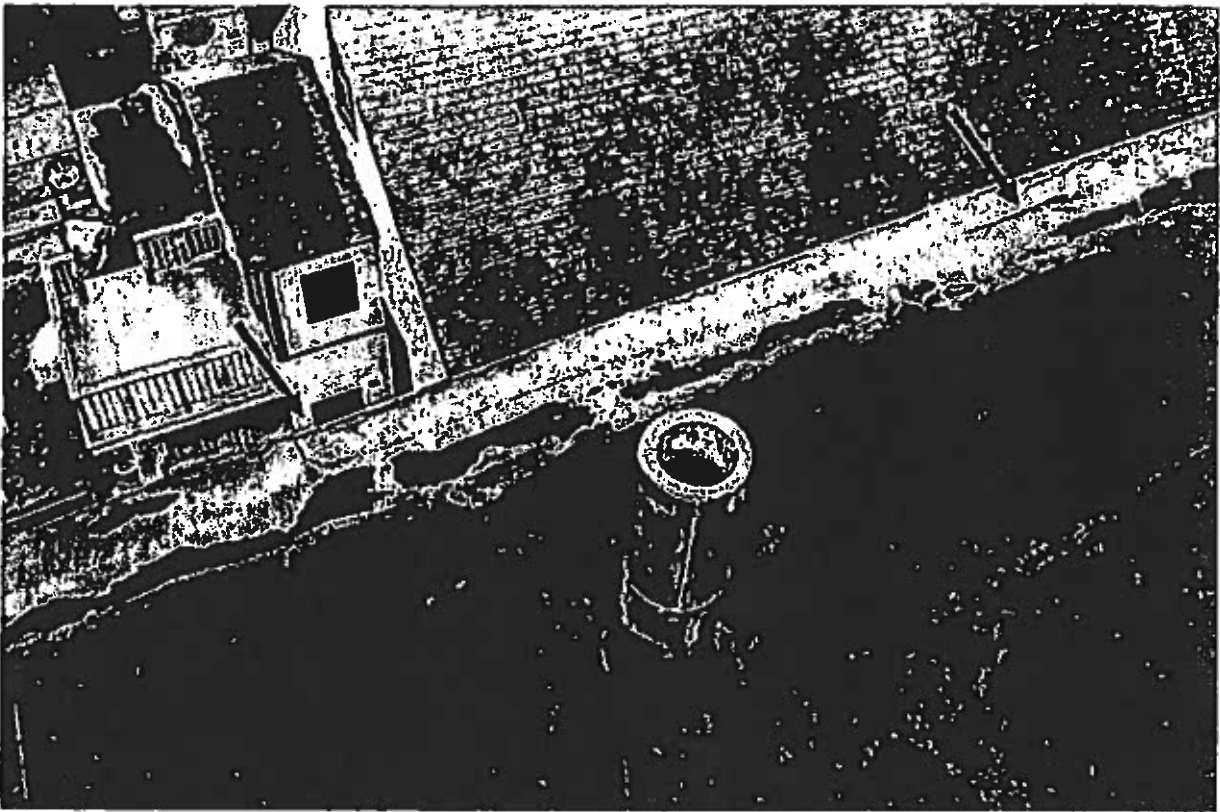


Photo 14. Other area depicting dried out seam crack along the coping/edging and seam crack that is dried out.

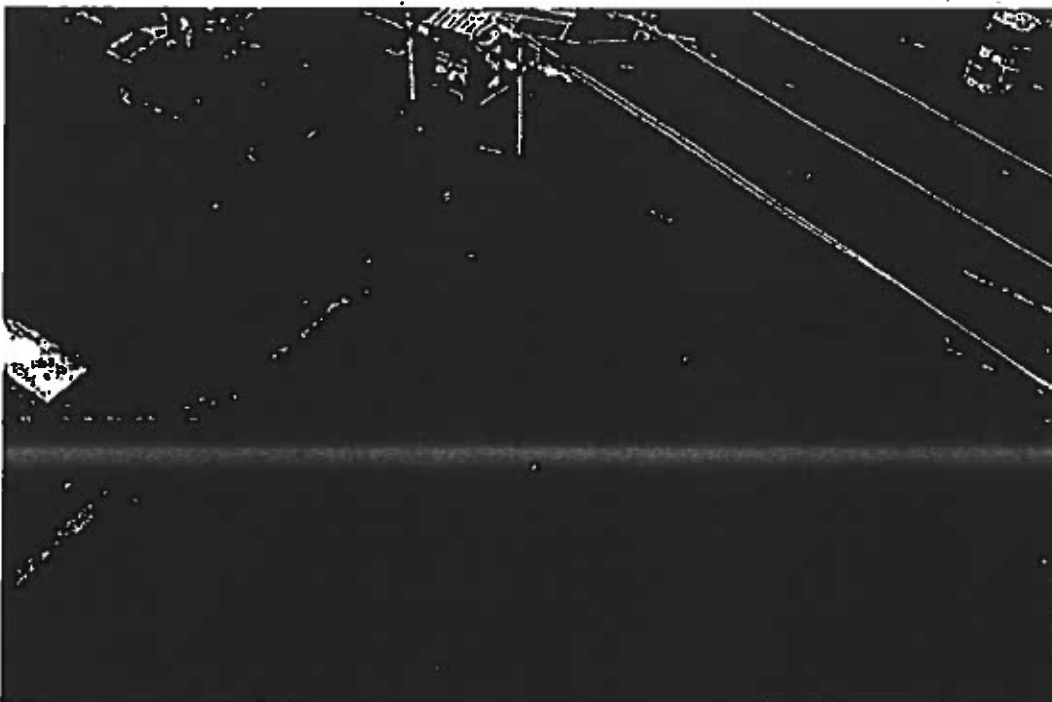


Photo 15. Area of past repair along the edge/seam that is also drying out.

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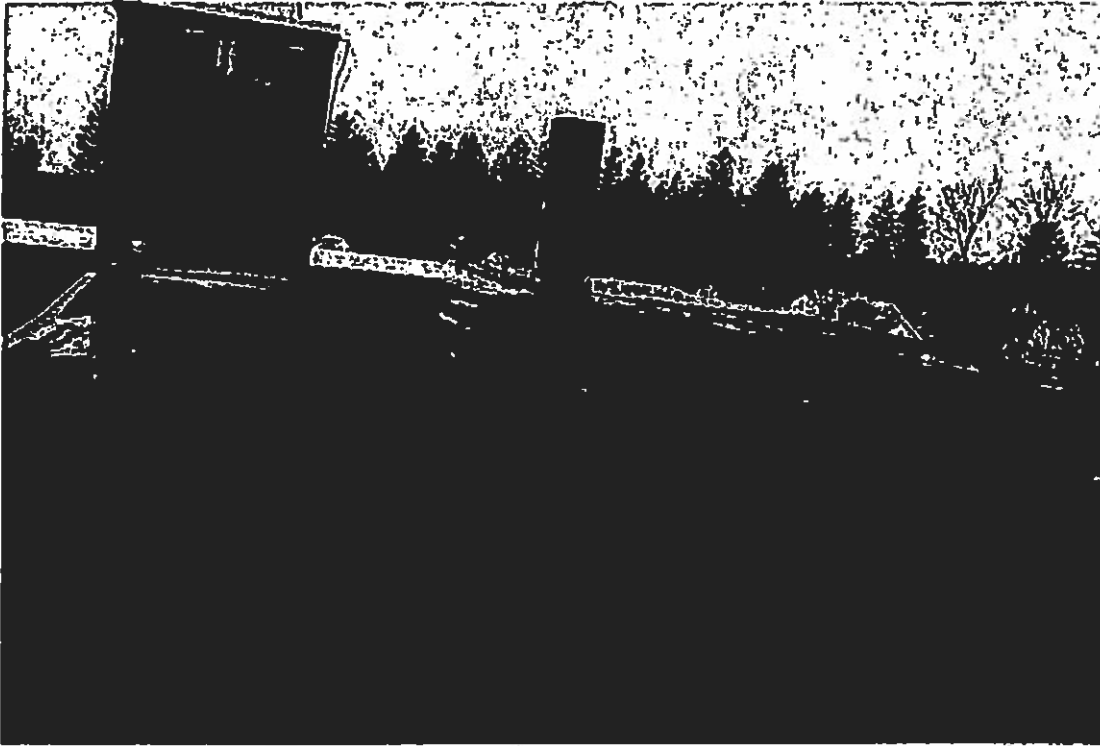


Photo 16. Main roof area looking east. Note section of roof ponding.

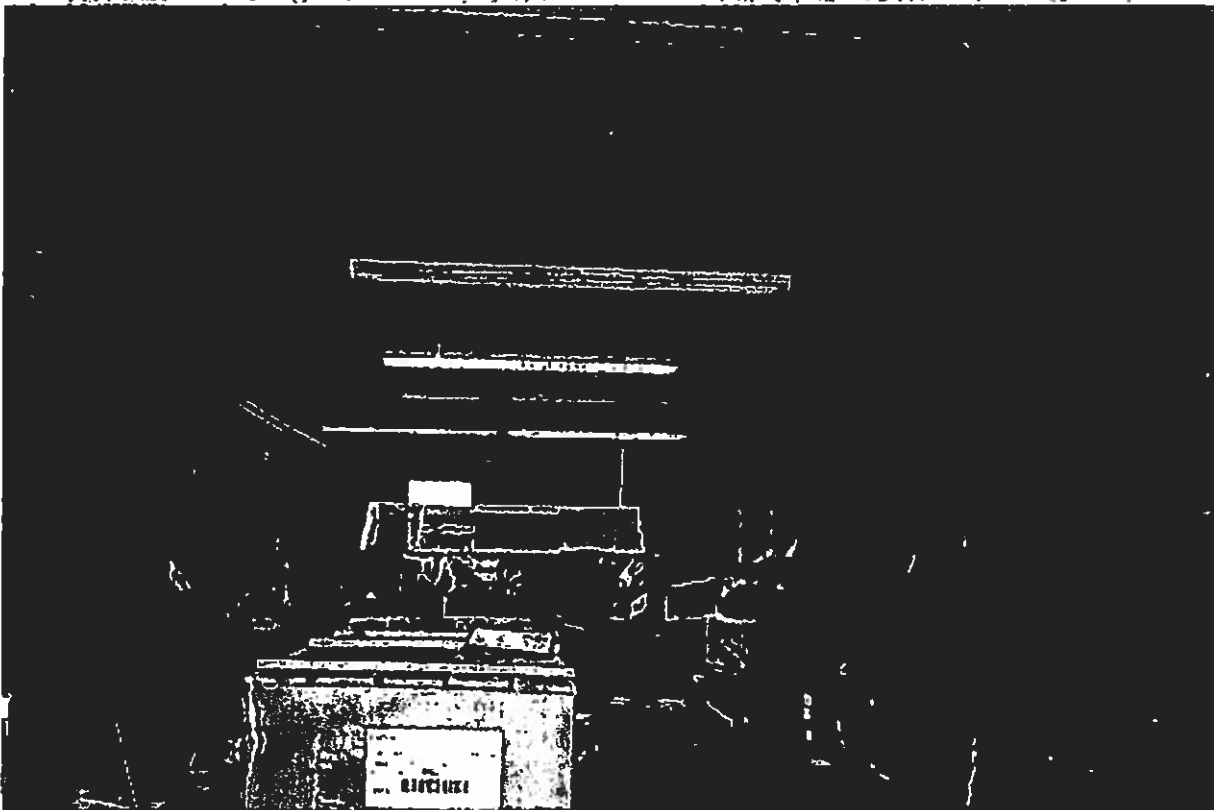


Photo 17. Steel/wood decking support framing underneath the damaged/tarped roof section in generally good condition.

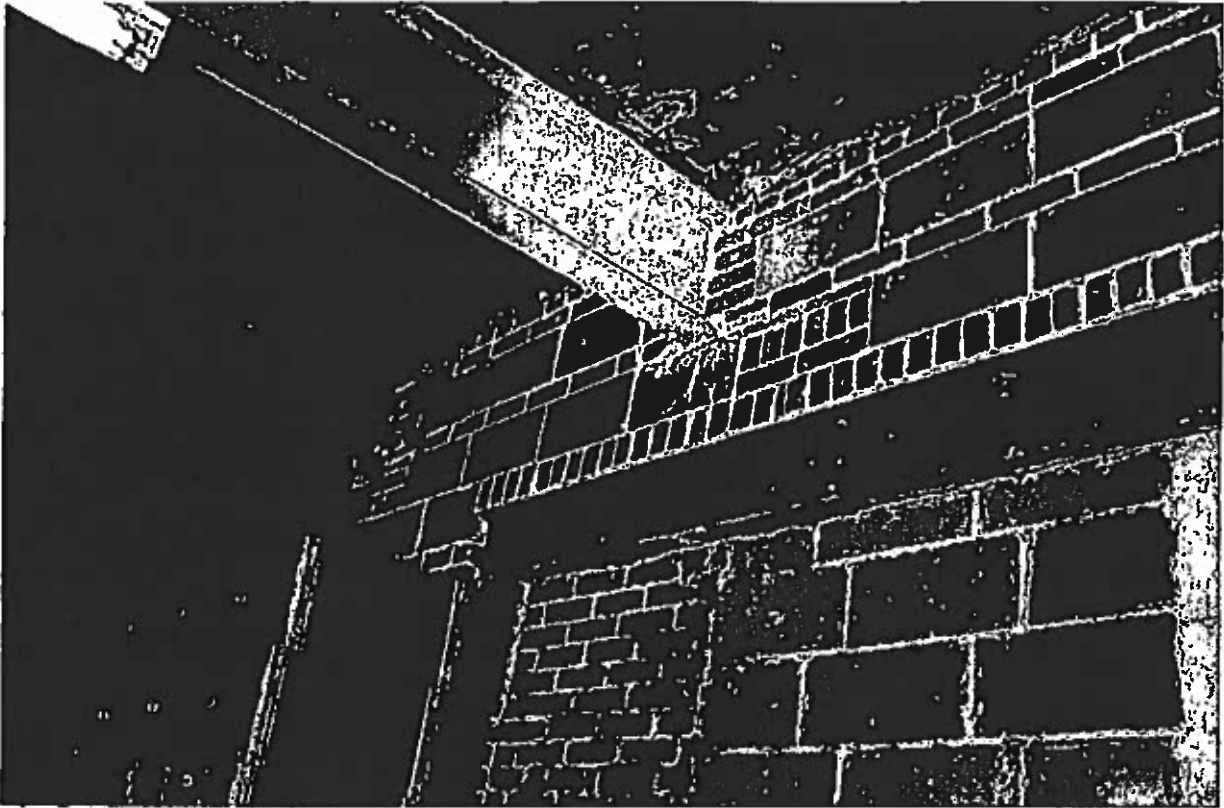


Photo 18. Area along west wall (and various other sections under the decking NOT under the tarped area) depicted some areas of moisture intrusion/stains along the walls.

Analysis:

It was reported that the damaged roof section contains 2 layers of roofing material. Current Massachusetts Building Code that is utilized, adopted, and referenced is 9th edition 780 CMR - which is based on several 2015 International Code references, including the International Building Code (utilized more for new construction) and the 2015 International Existing Building Code, which more applies to existing buildings and repairs (more applicable to this building/scenario).

The damaged section of the roof (noted to be the rear "L" portion of the roof) which is less than approximately 20% of the entire roof area of this level. It is recommended for ease or workmanship and to provide an even seam/joint – that the work area cover the section of roof just past the chimney up to the current existing jog in the roof (as noted Photo 1).

The contractor referenced various sections of 780 CMR chapter 15 which covers Roof Assemblies and Roof Structures. Review of this sections in a letter that was provided is the older 7/8th edition of the code that is no longer adopted/applicable.

Ninth Edition CMR 780

The ninth edition building code was filed with the Secretary of State on Friday, Oct. 6, 2017 and became effective on Oct 20, 2017

Building permit applications for projects utilizing eighth edition code provisions needed to be filed on or before Dec. 31, 2017. Applications received on or after Jan. 1, 2018 utilizing eighth edition code were returned to the applicant for revision.

As a reminder, the new, ninth edition code is based on modified versions of the following **2015** codes as published by the International Code Council (ICC).

- The International Building Code (IBC);
- International Residential Code (IRC);
- International Existing Building Code (IEBC);
- International Mechanical Code (IMC);
- International Energy Conservation Code (IECC);
- International Swimming Pool and Spa Code (ISPSC); and
- Portions of the International Fire Code (IFC)

Figure 1. MA code – 9th Edition references.

The 2015 International Existing Building Code notes the following conditions:

CHAPTER 1 SCOPE AND ADMINISTRATION
Fifth Printing: Nov 2015

CHAPTER 1 SCOPE AND ADMINISTRATION

PART1—SCOPE AND APPLICATION

SECTION 101 GENERAL

[A] 101.1 Title.

These regulations shall be known as the *Existing Building Code* of **[NAME OF JURISDICTION]**, hereinafter referred to as "this code."

[A] 101.2 Scope.

The provisions of the *International Existing Building Code* shall apply to the *repair, alteration, change of occupancy, addition to and relocation of existing buildings.*

[A] 101.3 Intent.

The intent of this code is to provide flexibility to permit the use of alternative approaches to achieve compliance with minimum requirements to safeguard the public health, safety and welfare insofar as they are affected by the *repair, alteration, change of occupancy, addition and relocation of existing buildings*

Figure 2.

The chapter pertaining to Repairs is noted under Chapter 6.

CHAPTER 6 REPAIRS

SECTION 601 GENERAL

601.1 Scope.

Repairs as described in Section 502 shall comply with the requirements of this chapter. Repairs to *historic buildings* need only comply with Chapter 12.

601.2 Conformance.

The work shall not make the building less conforming than it was before the repair was undertaken.

[BS] 601.3 Flood hazard areas.

In flood hazard areas, repairs that constitute *substantial improvement* shall require that the building comply with Section 1612 of the *International Building Code*, or Section R322 of the *International Residential Code*, as applicable.

Figure 3. 601.2 Conformance.

The IEBC does note that any repairs made DO have to comply with provisions and construction for under the IBC (meant for new buildings) but only for the area that is being repaired (meaning that any removed/replaced area that is damaged/noted on the back section of the roof would have to be removed-replaced down to the decking) and not the entire roof (presuming it is 2 or more layers on the damaged section).

[BS] 706.3 Recovering versus replacement.

New roof coverings shall not be installed without first removing all existing layers of roof coverings down to the roof deck where any of the following conditions occur:

1. Where the existing roof or roof covering is water soaked or has deteriorated to the point that the existing roof or roof covering is not adequate as a base for additional roofing
2. Where the existing roof covering is wood shake, slate, clay, cement or asbestos-cement tile.
3. Where the existing roof has two or more applications of any type of roof covering.

Figure 4.

It is likely and most probable that new ISO (insulation board) can be installed/secured to the existing decking and brought UP TO the thickness of the existing roof decking at a clean cut seam, and then the membrane can be installed. There most likely will be a small overlap heat welded seam between the new layer of the roof membrane and existing single ply, however the added change/weight of this material will most likely NOT depict any decrease in the overall structural stability of the supporting decking/framing material. Note that the rear damaged material consisting of the 2 layers weighs more than the new ISO board used to match the current thickness- thus, the overall weight atop the supporting wood decking and steel framing is ultimately reduced increasing its overall capacity in that span.

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BUILDING ELEMENTS AND MATERIALS

602.1 Existing building materials.

Materials already in use in a building in compliance with requirements or approvals in effect at the time of their erection or installation shall be permitted to remain in use unless determined by the *code official* to render the building or structure unsafe or dangerous as defined in Chapter 2.

602.2 New and replacement materials.

Except as otherwise required or permitted by this code, materials permitted by the applicable code for new construction shall be used. Like materials shall be permitted for repairs and alterations, provided no dangerous or unsafe condition, as defined in Chapter 2, is created. Hazardous materials, such as asbestos and lead-based paint, shall not be used where the code for new construction would not permit their use in buildings of similar occupancy, purpose and location.

Figure 5. Note that any replaced materials comply with new code or like kind/quality.

Chapter 34 of the IBC (that points out the use of the IEBC) 780 CMR includes amendments to the IEBC as noted below that shall apply to the repair of the portion of the roof damaged by the incident:

Massachusetts does have an amendment provision that indicates if the first/single layer of the membrane is adhered (glued) to the decking, it is allowed to remain while a new layer is added over it.

34.00: continued

706.3 Add exceptions 5 and 6 as follows:

5. For roof replacement and roof recover projects, where the existing roof assembly includes a built-up roof that is adhered to the roof deck, the existing built up roof shall be permitted to remain in place and be restored to good condition to serve as a sound substrate for the new roof covering, in accordance with the roof manufacturer's requirements.
6. For roof recover projects where there is only one layer of existing roofing present, existing continuous insulation shall be permitted to remain in place, provided all wet or otherwise deteriorated portions of the insulation is removed and replaced.

Figure 6. IBC Chapter 34 (referencing the use of the IEBC) Mass Amendment.

Google Maps Street view was utilized to provide an indication of the existing condition of the roof drip edge/coping (2015). Review of the photos indicate this condition of gaps along the edging/coping had pre-existed the reported storm event and not caused by the event.



Photo 18. Existing condition depicting the roof drip edge/coping.

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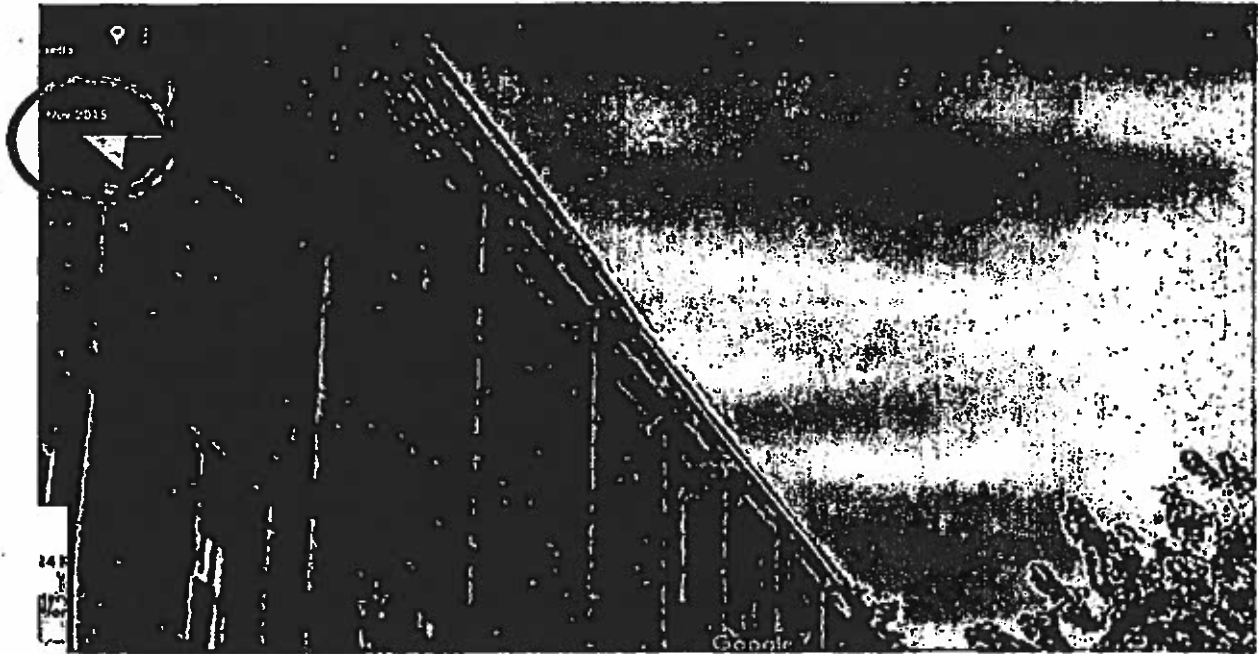


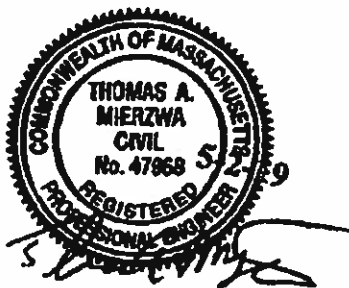
Photo 19. Close up depicts portions of the edge/coping with pre-existing gaps within the edge of the material and façade. The adjacent drip edge along the west elevation of the building was not caused/damaged by the storm.

Conclusions:

1. The damage to the noted/marked rear portion of the roof by the reported wind storm can be removed and replaced with new materials to match the existing profile of the other existing section.
2. Code provisions do not indicate nor enforce that the entire remaining roof area has to be replaced.

T.A.M. Engineering and Associates certifies the opinions contained within this report was based upon the information obtained at the time of this report, as well as experience, knowledge, education, and training by the undersigned. This report and information contained herein can be revised and modified should any new information become available or site conditions change.

Best regards:



Thomas A. Mierzwa, P.E.



ARCHITECTURE – INTERIORS – EXHIBITS – EVENTS

116 ARCADIA BOULEVARD, SPRINGFIELD, MASSACHUSETTS 01118

hervieuxdesign@gmail.com

413-222-3588

December 24, 2020

RE: Investigation & Evaluation Report of damage to Mansur Printing, 24 Shawmut Ave., Holyoke, MA

This Investigation & Evaluation Report of damage to Mansur Printing, 24 Shawmut Ave., Holyoke, MA is prepared for the exclusive benefit of the owner. Several investigations and reports have been prepared by others, but none of these have the authority and responsibilities required by the Massachusetts 9th Edition of the Building Code. My principal disagreement with these reports consist of their description of the work required to be 'REPAIRS'. This cannot be true as the damaged portion of the existing roof is gone and must be 'REPLACED'. The following are specific code references to be applied to this project:

INTERNATIONAL EXISTING BUILDING CODE 2015 EDITION (780 CMR) as it applies to this project

Chapter 1 Scope and Administration

101.2 Scope

The provisions of the *International Existing Building Code* shall apply to the repair, alteration, change of occupancy, addition to and relocation of existing buildings.

101.3 Intent

The intent of this code is to provide flexibility to permit the use of alternative approaches to achieve compliance with minimum requirements to safeguard the public health, safety and welfare insofar as they are affected by the repair, alteration, change of occupancy, addition and relocation of existing buildings.

102.1 General

Where there is a conflict between a general requirement and a specific requirement, the specific requirement shall be applicable. Where in any specific case different sections of this code specify different materials, methods of construction or other requirements, the most restrictive shall govern.

104.2.2.1 Building Investigation and Evaluation

For any proposed work regulated by 780 CMR 43.00 and subject to section 107 of 780 CMR, as a condition of the issuance of a permit, the building owner shall cause the existing building (or portion thereof) to be investigated and evaluated in accordance with the provisions 780 CMR 34.00.

Chapter 2 Definitions

201.1 Scope

Unless otherwise expressly stated, the following words and terms shall, for the purposes of this code, have the meanings shown in this chapter.

ALTERATION. Any construction or renovation to an existing structure other than a repair or addition. Alterations are classified as Level 1, Level 2 and Level 3.

REPAIR. The reconstruction or renewal of any part of an existing building for the purpose of its maintenance.

ROOF REPAIR. Reconstruction or renewal of any part of an existing roof for the purposes of its maintenance.

ROOF REPLACEMENT. The process of removing the existing roof covering, repairing any damaged substrate and installing a new roof covering.

WORK AREA. That portion or portions of a building consisting of all reconfigured spaces as indicated on the construction documents. Work area excludes other portions of the building where incidental work entailed by the intended work must be performed and portions of the building where work not initially intended by the owner is specifically required by this code.

Chapter 3 Provisions for All Compliance Methods

301.1 General

The repair, alteration, change of occupancy, addition or relocation of all existing buildings shall comply with one of the methods listed in Sections 301.1.1 through 301.1.3 as selected by the applicant. Sections 301.1.1 through 301.1.3 shall not be applied in combination with each other.

301.1.1 Prescriptive Compliance Method

Repairs, alterations, additions and changes of occupancy complying with Chapter 4 of this code in buildings complying with the International Fire Code shall be considered in compliance with the provisions of this code.

301.1.2 Work Area Compliance Method

Repairs, alterations, additions, changes in occupancy and relocated buildings complying with the applicable requirements of Chapters 5 through 13 of this code shall be considered in compliance with the provisions of this code.

301.1.3 Performance Compliance Method

Repairs, alterations, additions, changes in occupancy and relocated buildings complying with Chapter 14 of this code shall be considered in compliance with the provisions of this code.

Chapter 4 Prescriptive Compliance Method – not used

Chapter 5 Classification of Work

501.1 Scope

The provisions of this chapter shall be used in conjunction with Chapters 6 through 13 and shall apply to the alteration, repair, addition and change of occupancy of existing structures, including historic and moved structures, as referenced in Section 301.1.2. The work performed on an existing building shall be classified in accordance with this chapter.

501.2 Work Area

The work area, as defined in Chapter 2, shall be identified on the construction documents.

502.1 Scope

Repairs, as defined in Chapter 2, include the patching or restoration or replacement of damaged materials, elements, equipment or fixtures for the purpose of maintaining such components in good or sound condition with respect to existing loads or performance requirements.

502.2 Application

Repairs shall comply with the provisions of Chapter 6.

502.3 Related Work

Work on nondamaged components that is necessary for the required repair of damaged components shall be considered part of the repair and shall not be subject to the provisions of Chapter 7, 8, 9, 10 or 11.

503.1 Scope

Level 1 alterations include the removal and replacement or the covering of existing materials, elements, equipment, or fixtures using new materials, elements, equipment, or fixtures that serve the same purpose.

503.2 Application

Level 1 alterations shall comply with the provisions of Chapter 7.

504.1 Scope

Level 2 alterations include the reconfiguration of space, the addition or elimination of any door or window, the reconfiguration or extension of any system, or the installation of any additional equipment.

504.2 Application

Level 2 alterations shall comply with the provisions of Chapter 7 for Level 1 alterations as well as the provisions of Chapter 8.

Chapter 6 Repairs – Not Used

Chapter 7 Alterations - Level 1

701.1 Scope

Level 1 alterations as described in Section 503 shall comply with the requirements of this chapter. Level 1 alterations to historic buildings shall comply with this chapter, except as modified in Chapter 12.

702.6 Materials and Methods

All new work shall comply with the materials and methods requirements in the International Building Code, International Energy Conservation Code, International Mechanical Code, and International Plumbing Code, as applicable, that specify material standards, detail of installation and connection, joints, penetrations, and continuity of any element, component, or system in the building.

706.1 General

Materials and methods of application used for recovering or replacing an existing roof covering shall comply with the requirements of Chapter 15 of the International Building Code.

706.2 Structural and Construction Loads

Structural roof components shall be capable of supporting the roof-covering system and the material and equipment loads that will be encountered during installation of the system.

706.3 Recovering Versus Replacement

New roof coverings shall not be installed without first removing all existing layers of roof coverings down to the roof deck where any of the following conditions occur:

1. Where the existing roof or roof covering is water soaked or has deteriorated to the point that the existing roof or roof covering is not adequate as a base for additional roofing.
2. Where the existing roof covering is wood shake, slate, clay, cement or asbestos-cement tile.
3. Where the existing roof has two or more applications of any type of roof covering.

706.6 Flashings

Flashings shall be reconstructed in accordance with approved manufacturer's installation instructions. Metal flashing to which bituminous materials are to be adhered shall be primed prior to installation.

707.3.2 Roof Diaphragms Resisting Wind Loads In High-Wind Regions

Where roofing materials are removed from more than 50 percent of the roof diaphragm or section of a building located where the ultimate design wind speed, V_{ult} , determined in accordance with Figure 1609.3(1) of the *International Building Code*, is greater than 115 mph (51 m/s) or in a special wind region, as defined in Section 1609 of the *International Building Code*, roof diaphragms, connections of the roof diaphragm to roof framing members, and roof-to-wall connections shall be evaluated for the wind loads specified in the *International Building Code*, including wind uplift. If the diaphragms and connections in their current condition are not capable of resisting at least 75 percent of those wind loads, they shall be replaced or strengthened in accordance with the loads specified in the *International Building Code*.

Section 708 Energy Conservation**708.1 Minimum Requirements**

Level 1 alterations to existing buildings or structures are permitted without requiring the entire building or structure to comply with the energy requirements of the *International Energy Conservation Code* or *International Residential Code*. The alterations shall conform to the energy requirements of the *International Energy Conservation Code* as they relate to new construction only.

Conclusions and Recommendations:

1. I recommend that the owner choose the 'Work Area' level 1 method of code compliance.
2. As the work required to replace the damaged roof is not a 'repair for the purpose of its maintenance', this code rather defines it as an 'alteration'.
3. The damaged part of the existing roofing system cannot be 'repaired' but must be replaced in conformance with the requirements of 780 CMR for new construction.
4. 780 CMR makes no allowance for only 'partial' compliance of a code requirement. The entire roof system must comply as a whole. It serves no purpose if the construction of part of a roof might compromise the remainder.
5. I recommend that the existing roof areas, still present, be investigated for mold, as there is evidence that moisture has migrated to the interior of the building and its wood deck.
6. It's my experience that wood used in older buildings, not having been treated with fungicides, have a high probability of harboring 'dry rot' fungus. Though usually dormant, when subjected to a moist environment, highly destructive dry rot ensues. I believe it mandatory to investigate this condition in areas of the existing roof where rain water is likely to have penetrated and been trapped since the roof damage occurred. Once the wood roof deck experiences dry rot, there is no remedy but replacement.
7. The presence of multiple roofing layers and multiple flashing layers is a troubling detail in that their continued use would seem to invalidate any roofing manufacturers warranties.
8. To comply with the IECC requirement of R-30 continuous insulation above the existing roof deck, it is probable that the existing curb at the perimeter of the roof will have to be replaced or modified to accommodate the additional thickness of roof insulation required to comply with code.
9. It must be acknowledged that this is one roof, not two. One cannot perform well without the other.

10. This report is not intended to provide design solutions, so it is imperative that a design professional be retained for design services and for 'controlled construction'.
11. This report is not intended to be complete, as further destructive testing will be required. I reserve the opportunity to amend this report as needed.





ARCHITECTURE – INTERIORS – EXHIBITS – EVENTS

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December 24, 2020

**RE: Investigation & Evaluation Report of damage to
Mansur Printing, 24 Shawmut Ave., Holyoke, MA**

ADDENDUMS

**INTERNATIONAL EXISTING BUILDING CODE
2015 EDITION (780 CMR) as it applies to this project**

Chapter 4 Prescriptive Compliance Method

403.8 Roof Diaphragms Resisting Wind Loads in High-Wind Regions

Where the intended alteration requires a permit for reroofing and involves removal of roofing materials from more than 50 percent of the roof diaphragm of a building or section of a building located where the ultimate design wind speed is greater than 115 mph (51 m/s) in accordance with Figure 1609.3(1) of the International Building Code or in a special wind region as defined in Section 1609 of the International Building Code, roof diaphragms, connections of the roof diaphragm to roof framing members, and roof-to-wall connections shall be evaluated for the wind loads specified in Section 1609 of the International Building Code, including wind uplift. If the diaphragms and connections in their current condition are not capable of resisting at least 75 percent of those wind loads, they shall be replaced or strengthened in accordance with the loads specified in Section 1609 of the International Building Code.